Lower Passaic/Newark Bay model collaboration meetin g
September 25 at HDR | HydroQual, Mahwah, NJ

RayB, EugeniaN, JamesW, CliffF, Pravi, LarryS, JimF, RafaC, Ed Garl, Peter, RicardoP, PaulP, LeoP, someone from TetraTech, HanW

CPG will take minutes, include copies of all presentations. All review/comment on minutes. CPG submit technical memo in Oct outlining where model stands, including model code. EPA will comment formally.

10:00-11:30 CPG Presentation

1. CPG Progress

- Sediment transport modeling update

Continuity correction, so can run decoupled ST model.

- Refined analysis of bathymetric differencing

2008 multi-beam needs to be corrected by -0.3ft. There is some variability with location. Can't apportion variability along river.
2007-2008 no events (highest flow about 6000cfs)
Large changes in upper reaches of LPR due to bedload transport of sand.
Local erosion/re-filling is important (at least 50%). It is coarse materials from upstream – fine materials from upstream get washed into NB. What comes from NB is fine material. So is combination. CPG sampling in Dredging Pilot hole should help characterize.
Ask Roger Flood if he observed anything during 2008 multi-beam oversight.

- Incorporation of simplified organic carbon tracking in the contaminant fate model

Part of bed with high concentrations at surface – when deposition comes, newly deposited sediments resuspend with high concentrations, because of instantaneous mixing with bed. Need to more finely segment surface sed to prevent this. Lots of code changes. Still investigating:

- Particle mixing rate at surface

Can HQI develop input files for water year 2012, since CWCM events can then be simulated?

Should sediment bed OC be dynamically simulated?
CPG: What determines Carbon content in bed after remediation?
CPG: Run simplification under high flows for two years or more (one year is not enough). Also cover low flow year? Ideally do 15 yr simulation.
EPA team to write down our concerns with CPG's not simulating OC dynamically.

- Response to EPA comments at the last meeting

There are a number of Sedflume cores in cyclical erosion zones. There is no consistency in erodibility shown by the cores in the cyclical erosion zones. HanW wants to see photos of cores to see if can see any structural differences. LarryS to check USACE report.

- Qualitative report on 2012 bathymetry survey field effort

Multibeam done. Have done 2/3 of single-beam (will be done in Oct).

2. CPG Areas of Current Focus
   - Impact of tidal erosion/deposition on contaminants in the parent bed
   - Refinement of TSS and contaminant boundary conditio ns based on CWCM data

Need loading functions for 2012, encompassing CWCM sampling period. Need to know current approach for specifying boundary conditions?

   - Refinement of sediment initial conditions based on SSP data and bathymetric difference mapping

Do this next meeting.

11:30 -12:30 PM EST- Newark Bay SEDFLUME QAPP (Call in number: 866-299-3188 code Not responsive Not responsive) weblink TBD

12:30-1:00 Lunch

1:00-2:30 Newark Bay
- Status of Newark Bay System Understanding
- Status of modeling
- Data needs (MB and SB survey)
- Plan for model completion

2:30-3:00 EPA Presentation
FFS modeling status - Peer Review, Current Predicti ons, Ongoing work etc.

Discussion
- Next meeting

Next meeting: Nov 13 at 10-3 in Mahwah

- Actions